

Innovations in testing for multi-profile, multi-lingual and high volume testing

David Bearfield, EPSO





EPSO – An overview

- 28 Member States;
- More than 650,000 candidates have participated in a selection process since 2002;
- Over 950 selection processes organised;
- 20,000 successful candidates (average of 2,200 per year);
- 16,000 successful candidates recruited (average of 1,800 per year);
- 24 language testing;
- Global testing across 80+ test centres;
- 28,000 computer-based tests delivered so far in 2013





The need for change

- Recruitment process out-dated: based on 1950's competition model;
- Major overhaul of an outdated, extremely long selection procedure both for candidates and Institutions;
- Significant staff turnover in EU Institutions for the next decade;
- Need to compete successfully in the « war for talent ».



EPSO Development Programme

Based on the following 3 pillars:

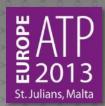
- Planning and Needs
- Testing and Professionalism
- Attractiveness and Diversity



In a war for talent, slow doesn't work!

- Most organisations will measure the effectiveness of their recruitment processes by at least two metrics – cost and time-tohire (efficiency)
- Here's how long it used to take to process applicants for the European Union Institutions:
 - 6 months to publish a notice of competition
 - Another 3/4 months to complete the first stage of computerbased testing (CBT)
 - Another 8/9 months before they got to a written exam and another month to have those marked and create a reserve list (if you are counting, we are up to 20 months)
 - Add another 4 months for interviews, medicals and offers ...
 - ...And that was a minimum of 24 months!





Competition structure – general overview

> 50.000 applicants



Taken by all applicants

- In Brussels
- Fixed quota of invited candidates with highest marks in CBT
- Tests in English, French and German

1. Computer-based (Admission) Tests ("CBT")

- General and field-specific competencies tested
- Usually tests over one day

3. Reserve list

Fixed quota





Computer-Based Testing

The EPSO programme would not have been possible without CBT:

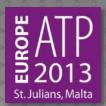
- Combined registration, booking and testing;
- Worldwide testing with around 80+ centres across the world (49 outside the EU) and covering all continents;
- 24 language testing:
- Currently there are 80,000 questions in the databank and ultimately there will be 100,000.
- According to experts in the field (notably ITC and ATP) at that point we will have one of the largest item banks of its kind in the world.



Testing in 24 languages

- Policy shift decided by EPSO's Management Board in 2008 in order to re-balance weight of respectively main and second language in the selection process;
- Two stage process:
- before 2011: Reasoning tests and SJT in main language within competitions where linguistic competencies are more specifically needed (linguists, secretaries, etc...);
- from 2011: Reasoning tests in main language as a rule in all competitions organised by EPSO, SJT in 2nd language;
- from 2012: New linguistic skills tests deployed for translators (also for the first time in Croatian).





CBT Item bank professional psychometric testing

- All questions provided by specialised companies;
 Item bank expanded from 3 to 24 languages, i.e.
 from approx. 10,500 to 80,000 items;
- Rigorous internal quality control;
- Number of questions neutralised (flawed items) extremely limited between 0.09 % and max 0.33% of pools used;
- In-depth item performance analysis since 2009.

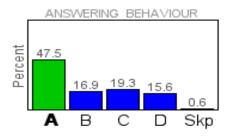




Item performance analysis sample item profile

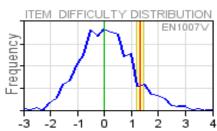
EN1007V Item Profile

Count	1835
Valid	1824
Correct	872
Avg Duration	110.6



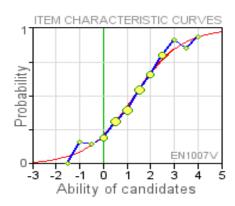
Rasch Model Measures

IPAR (Difficulty)	1.325
STD Error	0.051
Current Level	1



Model Fit Statistics

Infit MSQ	0.98	≈ 1, < 1.5
Outfit MSQ	0.98	≈ 1, < 1.5
r PTME	0.43	> 0.3
ObsMatch	68.1	> 67.3
Discrim	1.05	≈ 1





Feedback from candidates

- CBT presents a modern and customer userfriendly image for the EU;
- Since 2010, >99% of tests delivered without incident – any candidate who experienced difficulties usually offered the opportunity to retest. Candidates able to select time, date and place at which to test;
- Candidate surveys show consistently high satisfaction ratings of >90% (on-line satisfaction survey at the end of the tests).



Test Content

- Verbal reasoning test;
- Numerical reasoning test;
- Abstract Reasoning Test;
- Situational Judgement Test (mapped on EPSO's competency framework).



Multiple forms & languages

- Deployed at three levels at CBT stage:
 - Administrator (graduate), and two levels of Assistant;
- Deployed in multiple forms:
 - 40 equivalent test forms at each level,
 - Each form 20 items in 30 minutes;
- Deployed in multiple languages:
 - Initially deployed in English, French and German;
- Positive candidate feedback in 2010 cycle where they were used in a live pilot;
- 2011 used to screen candidates.





AST skills: Accuracy

- Target groups: AST1 and AST3;
- Measures the capacity to detect errors in given information by concentrating on details under time constraints;
- Test also reflect the repetitive aspects of such tasks!
- 40 items test in 6 mins. in either EN, FR or DE
 => Item layout will be identical within a single test;
- Tests developed with an expert external contractor.

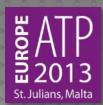


AST skills: Prioritising and Organising

Prioritise and organise own work:

- Target groups: AST1 and AST3;
- 35 items test in 20 mins. in either EN, FR or DE;
- Tests developed with an expert external contractor.





New reading comprehension tests

- Candidates will sit one test form (text and 12 MCQ) in each of the two different source languages;
- Items assessing: knowledge of vocabulary / understanding of the text / understanding of style and register;
- Each language will be tested for 25 min;
- Candidates will have access to the text during the whole test (split screen);
- Tests forms pre-build to ensure equal difficulty levels (83 test forms in 24 languages;)
- Provided by an external specialised Contractor (Communicaid);
- Proofread and reviewed (including difficulty level) by the Commisson's Translation service.





Test Taker Evolution Demo 1

Question 3 of 11

How health and safety is killing Christmas Council killjoys have made this the most health and safety-conscious Christmas ever, says Alan Pearce

Paragraph 1

It is hard to imagine how people coped in the days of Dickens before Christmas trees were sunk into two-tons of concrete and shrouded in rings of steel, when no one thought to weigh a seagull and risk-assess its impact on a town's festive illuminations.

Paragraph 2

Today, the greatest threat to the traditional Christmas is not its growing commercialism, but the modern obsession with health and safety.

Paragraph 3

Given the remoteness of the odds of members of the public being flattened by a Norwegian spruce toppling over in a busy market town, or a colleague choking on tinsel at the office party, it's a wonder so many local authorities have time to think about such matters at all. When I first started looking into the madcap world of health and safety, thinking it no more than a ludicrous joke, I had no idea how far they could push this thing.

Paragraph 4

This year, your Christmas will have been risk-assessed to within an inch of its life. New safety legislation is in place that puts the onus for health and safety on individuals rather than the organisations they work for. Now, anyone who puts the public in 'danger' faces two years in jail or an unlimited fine.

Paragraph 5

The result has been to put every public body, from schools to department stores, on full red alert. Forget about the council de-icing our slippery roads – there are traffic roundabouts and lampposts that need risk-assessing.

In the context of paragraph 9, which synonym from the following list would be most appropriate to replace "moaning" in line 1?

- CA. lamenting
- CB. grumbling
- C. deploring
- CD. sighing



Interpreters intermediate tests

- Simultaneous interpretation of a recorded speech (approx. 12 min);
- Test is delivered between the admission stage and the assessment centre – AD5 level only (entry level);
- Computer-based test audio-video format (candidates look at an audio-video file (speech) and record simultaneous interpretation.





















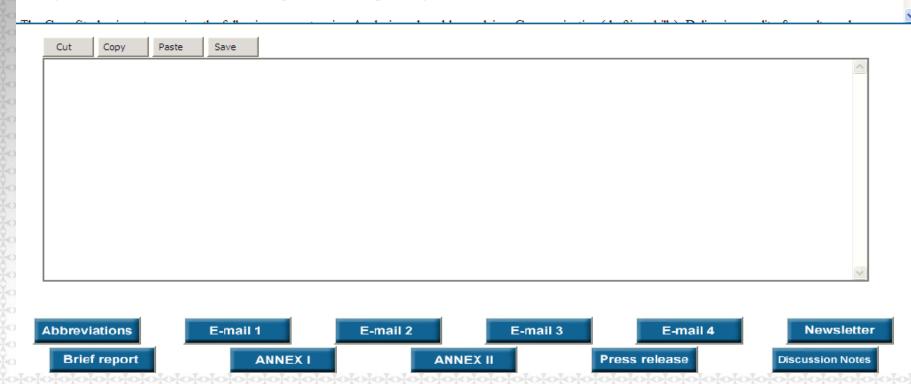


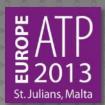
Listening comprehension tests (Interpreters)

For this exercise you will assume the role of desk officer at DG Enlargement within the Unit responsible for the Balkan Region. The documentation you need, is integrated in this booklet. You will find in it a certain number of e-mails, reports, articles and other documents that you will need to analyse and integrate in order to be able to properly deal with the assignment given to you. This is your first day in your new job.

It is important that you accept the simulated situation as it is presented to you. Although in a real life situation you would have access to other sources of information and would be able to consult your colleagues, in this exercise you are limited to the information contained in the exercise documents. You are, however, allowed to make logical assumptions where information is missing or incomplete.

You may rearrange the documents in any order you wish and add remarks or make notes as necessary. However, remember that the assessors will base their evaluation exclusively on what you write on the lined paper that has been put at your disposal. Therefore, be sure to record on these sheets all the information on which you wish to be evaluated and be sure to explain the reasoning behind your ideas.





Listening comprehension tests (Interpreters)

- Candidates will sit two test forms (speech and 13-16 MCQ) in each of the two different passive languages;
- Each language will be tested for 20-25 min (50-55 min total testing time);
- Candidates will hear the speech once only;
- Questions will not be seen before the end of the speech.





Essay-type tests on computer

- Translations in 24 languages on computer (translators competitions and lawyer linguists preliminary tests);
- Case-study on computer for the AD cycles (progressively extended to other competitions).



And coming soon...





Psychometric Action Plan II

EPSO's first psychometric action plan focussed on CBT and introduced the Rasch model for item analysis. PAP II aims to:

- Implement a test form assembling algorithm, taking results of the item analyses into account;
- Expand item pool of Abstract Reasoning and apply same test form assembling algorithms as for VR and NR;
- Take more ownership of core elements and create a Talent module to host and maintain the item database and to perform automated psychometric services;





Psychometric Action Plan II

- Include meta-information in the database to categorise the item content to identify constructs showing an adverse impact;
- Involve more communication technologies (e.g. video recording of group exercises in the Assessment Centres) and explore/use "off the shelf" tools;
- Evaluate criteria of DIN 33430 (requirements for proficiency assessment procedures and their implementation) and ISO 10667 (assessment service delivery) and take necessary measures to achieve compliance. Use it to communicate the high quality standard of EPSO's selection procedures.



Improving the testing process





2 steps selection process (today)

STEP 1

Cognitive testing

Competencies

- Verbal Reasoning
- Numerical Reasoning
- Abstract Reasoning

Location

All EU capitals

Testing system

Computerized

Applicants

All eligible applicants

STEP 2

Competency testing

Competencies

- all



Location

EPSO premises, Brussels

Testing system

Assessors + Etray

Applicants

Nb of expected laureates x 3

w.neAT



3 steps selection process (project)

Assessment Centre

STEP 1

Cognitive testing

Competencies

- Verbal Reasoning
- Numerical Reasoning
- Abstract Reasoning

Location

All EU capitals

Testing system

Computerized

Applicants

All eligible applicants

STEP 2

Competency testing I

Competencies

- Analysis and Problem Solving
- Delivering Quality and Results
- Prioritizing and Organizing
- Working with others
- Job related applied knowledge

Location

All EU capitals

Testing system

E-tray + video recorded interview

Applicants

Nb of expected laureates x 4

STEP 3

Competency testing II

Competencies

7

Location

- all

EPSO premises, Brussels

Testing system

Assessors

Applicants

Nb of expected laureates x 1,5

peATI



Advantages of the 3 steps process

- Cost reduction on travel and accommodation of applicants
- Cost reduction on assessor mobilization time
- Higher admission rate to AC phase
- Improved gender balance
- Increased weight of job related competency in AC admission
- Same or shorter delivery time





Self-selection questionnaire

- High percentage of re-testers who tend to lack relevant information on what EU careers actually entail and whether they are suited for a particular profile.
- The goal is to assist them in making an informed choice and in considering more carefully whether they are well-suited to an EU career, whilst at the same time maintaining a positive employer image.
- The questionnaire will refer to the EPSO competency framework so that all of the competencies are covered and feedback will be provided too.



Thank You

If any questions, contact nicholas-david.bearfield@ec.europa.eu

Twitter: @DavidBearfield

Please complete the session evaluation.

